

**In the Specification:**

Please amend the specification as shown:

Please delete the paragraph on page 9, line 10-20 and replace it with the following paragraph:

FIGURE 3 shows a phosphorimage of a denaturing polyacrylamide gel (20%, 7 M urea) used to identify the high-molecular weight conjugate formed between DNA and Ni(salen)-biotin. The 5' [<sup>32</sup>P] labeled oligodeoxynucleotide (18' mer), 5'-d(AAAATATCAGATCTAAAA; SEQ ID NO: 1) (12mM, 6 nCi), in 10 mM sodium phosphate pH 7 (lane 1) was alternatively incubated with Ni(salen)-biotin 2 (50 mM, lane 2), MMPP (120 mM, lane 3) and their combination (lane 4). The resulting DNA conjugate was isolated from a monomeric avidin affinity column (lane 5) and subsequently treated with piperidine (0.2 M, 90°C, 30 min, lane 6). A standard G-lane was generated by dimethylsulfate as described by Maxam and Gilbert (lane 7) (Maxam, A. M.; Gilbert, W. *Methods Enzymol.* **1980**, *65*, 499-560). As a control, the parent oligonucleotide was also treated with piperidine (0.2 M, 90° C, 30 min, lane 8).

Please delete the paragraph on page 10, line 1-10 and replace it with the following paragraph:

FIGURE 6 shows phosphorimage of 20% polyacrylamide denaturing gel (7 M urea) showing high-molecular weight adducts to DNA formed with nickel complexes. The 12-mer oligodeoxynucleotide, 5'-d(ATATCAGATCTA; SEQ ID NO: 2)-3', was labeled at the 5' terminus with <sup>32</sup>P and incubated with reactants under the standard conditions described in Supporting Information. Lane 1: DNA alone. Lane 2: control with 100 μM Ni(salen-ArgHis) only. Lanes 3-6: 100 μM **8** plus the indicated concentrations of oxidant. Lane 7: control showing the effect of Na<sub>2</sub>SO<sub>3</sub> without metal complex. Lane 8: control with 2 μM **9**. Lane 9: 2 μM **9** plus Na<sub>2</sub>SO<sub>3</sub>. All experiments were carried out in the presence of air and included EDTA in the workup. Cross-linking yields in lanes 3, 4, 5, and 6 were 16, 36, 39, and 80%, respectively.

Please delete the paragraph on page 10, line 12-21 and replace it with the following paragraph:

FIGURE 7 shows the effect of piperidine treatment of the DNA-Ni(salen-ArgHis) adduct. Reactions were run in a similar manner as those in FIGURE 6. Lane 1: control using 100  $\mu$ M Ni(OAc)<sub>2</sub>, 100  $\mu$ M ArgHis dipeptide and 1 mM Na<sub>2</sub>SO<sub>3</sub>, showing that a high-molecular-weight species does not form in the absence of salicylaldehyde. Lanes 2-6: Reactions with 100  $\mu$ M 1 and 1 mM Na<sub>2</sub>SO<sub>3</sub> followed by piperidine treatment (0.2 M, 90° C, 30 min) when so indicated. Lanes 2 and 3: 12-mer oligonucleotide (SEQ ID NO: 2) band cut and isolated from a previous gel after the adduct had formed. Lanes 4 and 5: Band corresponding to high-molecular-weight adduct cut and isolated from a previous gel. Lane 6: Typical reaction of 100  $\mu$ M 1, 1 mM Na<sub>2</sub>SO<sub>3</sub> with piperidine treatment. Lane G: Maxam-Gilbert G lane using dimethylsulfate.

Please delete the paragraph on page 10, line 23-27 and replace it with the following paragraph:

FIGURE 8 shows ESI-MS spectrum of the high molecular weight adduct isolated from the reaction of the 12-mer oligodeoxynucleotide (SEQ ID NO: 2) and Ni(salen-ArgHis) with sulfite and O<sub>2</sub>. The molecular weight of the 12-mer itself is 3628 as determined by ESI-MS. (R.J. Perse, Ph.D., Dissertation, University of Utah, 1997) The proposed structure of the salicylaldehyde adduct is shown.

Please delete the paragraph on page 29, line 1-9 and replace it with the following paragraph:

**DNA experiments.** The oligonucleotide 5'-d(AAAATATCAGATCTAAAA; SEQ ID NO: 1) was prepared by automated solid-phase synthesis, purified using a NAP<sup>TM</sup>-25 column (Pharmacia Biotech) and 5' end-labeled with <sup>32</sup>P using T4 kinase and gamma-[<sup>32</sup>P]-ATP. DNA (11  $\mu$ M, 6 nCi) was mixed with the Ni(salen)-biotin conjugate 2 (50  $\mu$ M) in

sodium phosphate (10 mM, pH 7.0) and incubated under ambient conditions for 10 min. Reaction was then initiated by addition of MMPP (120  $\mu$ M) to a final volume of 50  $\mu$ L. After further incubation for 30 min, a loading buffer (8 M urea) was added, and the samples were directly analyzed by denaturing polyacrylamide gel electrophoresis (20%) and phosphoimagery.